

# KOYO Brand XY Model Automatic Liquid Packer Instruction Manual

[www.koyowater.com](http://www.koyowater.com)

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Please read the instruction manual carefully before start – UP

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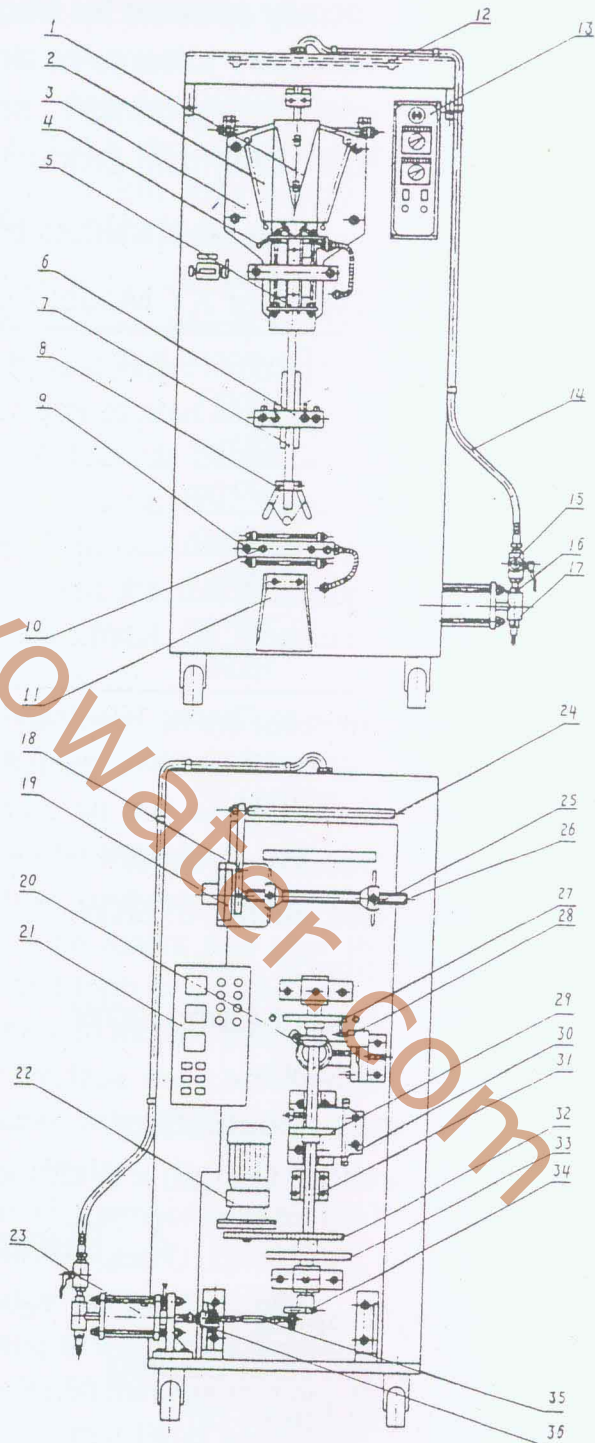
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### Caution:

All the moving parts , especially horizontal seam heat sealing, when they are moving. keep your hands off! or it will result in physical harm.

# 1. Main spare parts Name List

NO	Name
1	Shaper central panel
2	Shaper fold - out
3	Shaper bottom panel
4	Bag - press wheel
5	Vertical heat sealing edge
6	Go - bag pliers
7	Centre pipe
8	Rising wing
9	Horizontal heat sealing
10	Horizontal heat sealing edge pressure - regulating screw
11	Hopper
12	Headlamp
13	Data plate
14	Infusion tube
15	Tee change valve
16	Upper check valve
17	Lower check valve
18	Damping tumbling rod
19	Feed roll rocker panel
20	go - bag crank
21	Switchboard
22	Decelerator
23	Constant rate pump
24	Tape - through pipe
25	Adapter sleeve
26	Feed roll central screw
27	Vertical sealing cam
28	Positioning shut - down
29	Go - bag cam
30	Go - bag rocker panel
31	Go - bag slide sleeve
32	Power gear
33	Horizontal sealing cam
34	Constant rate pump crank
35	Constant rate pump link
36	Constant rate pump piston loop bar



## 2. Main Uses

This packer is widely used for liquid packing (liquid free from air), and is especially suitable for bag – packing such liquid materials as soy sauce. vinegar. juice. juice drinks. mixing drinks. (drinks can also be frozen into ice bag drinks), soya – milk, milk, purified water, beancurd and liquid chemical products.

## 3. Technical Parametre

Available Types of XY Model Automatic Liquid Packer

Application Voltage		Film Developed Width (mm)	Packing Capacity (ml)	Production Efficiency (h)
380V	220V			
Type1	Type12	320mm	200 – 500	1500bags
Type2	Type22	320mm	200 – 500	2000bags
Type3	Type32	240mm	70 – 350	1500bags
Type4	Type42	240mm	70 – 350	2000bags
Type5	Type52	160mm	40 – 180	1500bags
Type6	Type62	160mm	40 – 180	2000bags

Note: It is advisable to Choose 1500 bag/h type packer when producing such high concentration products as soya – bean milk. milk. soy sauce. vinegar and etc.

Power power: 0.37KW

Vertical Heat Sealing: 0.3KW

Horizontal Heat Sealing: 0.5KW

Ultraviolet Sterilamp: 15W

Lighting Fluorescent Lamp: 20W

Voltage: AC220/380v

Machine Weight: about 650kg

Overall Dimension: (length × Width × height) 1050 × 750 × 1900mm

## 4. Functions

- |                                  |                               |
|----------------------------------|-------------------------------|
| (1) feed bag shaping             | (2) ultraviolet sterilization |
| (3) vertical seam heat sealing   | (4) date composition          |
| (5) straight bag haul – off      | (6) constant rate filling     |
| (7) horizontal seam heat sealing | (8) feed bag cut – off        |
| (9) automatic counting           | (10) positioning shut – down  |



## 5. Operational Directions

(1) Install the machine in a dry place with good ventilation and lighting. The four legs of the body should keep stable on the same surface, and if necessary, fasten them with four pre – buried footing screws.

(2) Be careful about the power – line connection. Ask some experienced electricians to close the circuit and install a iron – case switch in the lead – out place (the red, grey, green wires connect with 380V supply, the black wire directly connects with the zero line (220) of the supply, but not the ground wire!). In addition, the machine frame must be well – connected to the ground.

If the machine is a 220V type. it is acceptable to connect to the lighting circuit. but the lead – in circuit must have enough capacity. or when the voltage drops too much. it is difficult for the motor to start working.

The rotary direction of the drive shift should be anti – clockwise.

(3) Fill the container with water (or 75% alcohol), then use a rubber hose to cover the discharging pipe (keep away from horizontal sealing edge!) and lead it to the sewer (or for circulating use). Start the machine and let it run 5 to 10 minutes to flush the pipes so that it can meet the foodstuffs hygiene requirements.

(4) Put the single layer plastic rolled tape on the rolled tape shaft. turn the adapter sleeve. First, fix the central bone pipe of the rolled tape. adjust it to the centre line in alignment with the shaper so that when the rolled tape is being shaped. the width of the two sides can be the same. Then respectively tighten the two screws on the adapter sleeve. Adjust the spring pressure on the damping tumbling rod properly to such an extent that after the automatic feed bag haul – off. It still can swing back and forth freely and has good braking.

(5) After the rolled tape passes through the two tape – through pipes, buckle it into the shaper and make sure that the tape must be bilateral symmetric. Adjust the date to that very day – the proper order from top to bottom should be × × year × × month × × day.

(6) Regulate the vertical heat sealing temperature to 140℃ ~ 170℃, horizontal heat sealing temperature to 200℃ ~ 250℃ (prohibited from surpassing 260℃, otherwise the heat sealing edge will be damaged). As to the specific temperature, regulate it slightly according to the indoor temperature, bag material and its thickness. preheat the machine for 30 minutes to make the temperature of the heat sealing edge constant, then normal filling production can be started. After that, so long as the power supply is not cut off. even if without re – pre – heat. the production can still go on.

(7) Adjust the go – bag link to the position of variable crank, the required bag length is gettable. If adjust inwards, it will shorten the bag length; if adjust outwards. it will extend the bag length. But before making the adjustment. Cut off the power supply. when adjusting. Loosen the clamp nut on the slipper, then the adjusting knob can be turned. After finishing the adjustment. screw on the clamp nut before setting the machine going.

(8) Adjust the constant rate pump link to the position of variable crank. the required filling amount is gettable. If adjust inwards. it will decrease the filling amount. if adjust outwards, it will increase the filling amount. The specific operation is the same as the above(see(7)).

The piston ring of this packer is an adjustable component. after using a period of time, you may find that close to the water pump barrel. there is some leakage at the bottom. Loosen the tightening screw on the piston loop bar. Turn the piston loop bar clockwise(inwards) to make the piston ring swell, then the leakage problem is solved. (please remember: Just make a slight adjustment. or the piston ring will be damaged). After finishing the adjustment. screw on the tightening screw to avoid looseness of displacement.

(9) In normal production, just press the button and the machine starts to work. The production quantity of each shift is automatically counted by the counter. When the rolled tape is run out, stop the machine at once and replace a new one. Turn the constant rate pump T – valve to circulation state. stop the liquid supply. Only after the new feed bags are shaped can we start the liquid supply and go on with the production.

(10) If there is much more solid matter in the wait – for – filling liquid, filter the liquid in advance. After using a period of time. the vertical and horizontal sealings' non adhesive tape is worn out. Loosen the tape – clip hose and make a slight adjustment to let it leave more length. then tighten the hose and it can come into use. (caution: the length must be adjusted before the non – adhesive tape is completely worn out. )

(11) In order to guarantee the precision, the container's liquid level must be half a meter lower than constant rate pump to the maximum. If there is a control valve inside the infusion tube. it should not be in “off” state when start – up.

(12) Check the horizontal and vertical sealing edges regularly. Clear away the foreign matter on them in time, otherwise this will affect the heat sealing. When cleaning, never use metal tools and sand paper to scratch, or the working surface will be damaged and become useless. The best way for cleaning is: After the temperature drops. use a piece of cloth or wooden tools



soaked with organic solvent to wipe it gently.

(13) In order to extend the life of non – adhesive tape and improve heat sealing effect, regularly (several times each shift) apply methyl silicon oil to the horizontal and vertical sealings' non – adhesive tape. (methyl silicon oil type: 201 – 350cs)

(14) When such abnormal phenomena as untight sealing, bag connection. leakage and etc. Happen, it is not allowed to poke by hand or other tools and must stop the machine to solve the problem.

(15) This packer' s operation procedures and matched dimensions have been adjusted to the optimal state before leaving the factory. If the users need maintenance, please ask some experienced technicians to write down the dimensions of the damaged parts. then disassembly the machine.

## 6. Maintenance

(1) When stopping using the machine, flush the residue in the pipes promptly, or the residus will deteriorate and affect the quality of next shift. If necessary, disassemble the plastic infusion tube and use a brush to clean it. In the mean time, wipe the machine in time to keep it dry and clean.

(2) Check all the moving parts and lubrication in each shift. Add enough 20# lubricating oil or lithium grease at all times otherwise the machine cannot run smoothly and this will seriously affect the machine' s life.

(3) In each shift, check and clear away the foreign matter on the horizontal heat sealing edge. scaling is not allowed, or the pyro coductivity will drop, the sealing edge temperature will rise, and the horizontal heat sealing cannot work properly.

(4) If something is wrong, cut off the power supply, at once, Re – start the machine until the breakdown has been fixed.

(5) In winter, when the temperature drops below 0℃, use hot water to melt the frozen materials in the constant rote pump and in the pipes, otherwise the link will be broken or the machine cannot start working.

(6) The thickness of single – layer plastic film applicable to this machine is 80 um, and in the mean time the film' s tensile strength, uniformity and lubrication must be guaranteed, The weight of each roll must be less than (320mm) 18kg or (240mm) 14kg. Horizontal heat sealing' s temperature should be 260℃ below. In addition, if the users don' t use the recommended single – layer plastic film, which results in abnormal heat sealing or high percentage of broken bags, the users themselves, will hold responsible for the consequences.

## 7. Breakdown and Trouble Shooting

Breakdown	Causes and Trouble Shooting
1. The machine doesn't work and the indicator lamp is off.	<ol style="list-style-type: none"> <li>1. Please ask an electrician to check the power supply to see if it is a phase fault or voltage loss.</li> <li>2. Make sure that the main power supply is on.</li> <li>3. Make sure that the electrical elements are in good condition.</li> </ol>
2. Moving parts produce abnormal noises.	<ol style="list-style-type: none"> <li>1. Lack of lubricating oil.</li> <li>2. Loose screws result in displacement.</li> <li>3. Serious wear – out.</li> </ol>
3. Liquid supply is insufficient or unstable	<ol style="list-style-type: none"> <li>1. The link screws are loose.</li> <li>2. There is some foreign matter in the inlet and outlet non – return valve.</li> <li>3. There is some air in the infusion tube or the sealing is not in good condition.</li> <li>4. The crank slipper's pressing gasket doesn't press tightly.</li> <li>5. The feed barrel's liquid surface is too high.</li> </ol>
4. The feed bags are not of the same length	<ol style="list-style-type: none"> <li>1. go – bag screws become loose.</li> <li>2. The rubber washer on the bag grip holder of go bag pliers wears out or there are some greasy dirt on it, Clean it with household liquid detergent.</li> <li>3. Feed roll's damping tumbling rod can not swing back and forth regularly.</li> <li>4. Plastic rolled tape is over – weight.</li> </ol>
5. Horizontal and vertical sealings have no temperature or the temperature is unstable.	<ol style="list-style-type: none"> <li>1. Check to see if the instrument works well.</li> <li>2. Check to see if the thermocouple is damaged or falls off.</li> <li>3. Check to see if the electrothermic tube is damaged.</li> <li>4. Controlled silicon is damaged, the power supply has phase fault or the connector lugs are loose and come off.</li> </ol>



Breakdown	Causes and Trouble Shooting
<p>6. Heat –sealed edge is not satisfactory: the percentage of broken bags is high and dateprinting is unclear.</p>	<ol style="list-style-type: none"> <li>1. Replace the non – adhesive tape or adjust its position.</li> <li>2. Check to see if the rubber washer is flat or has some press damages. If it has been damaged, replace a new one.</li> <li>3. Filling amount is too large, leave small room for air.</li> <li>4. Ragulate to the proper temperature.</li> </ol>
<p>7. The operators get an electric shock.</p>	<ol style="list-style-type: none"> <li>1. The power supply has wiring fault or loose contact.</li> <li>2. The whole packer should be well earthed.</li> <li>3. Heat sealing edge' s wiring should be well insulated from the outside.</li> <li>4. Liquid spray on the power supply' s connector lugs or on the electrical eiements is not allowed.</li> </ol>
<p>8. Horizontal sealing bag –cut – off can not work properly: Bags are not cut off and after heat sealing, the antipressure strength cannot reach the standard.</p>	<ol style="list-style-type: none"> <li>1. Clear away the foreign matter on the horizontal sealing edge at once.</li> <li>2. Check to see if the PTEE heat –insulation plate on the sealing edge becomes loose.</li> <li>3. Replace the rubber washer on the push –panel.</li> <li>4. Thickness of the plastic film should be 80µm</li> <li>5. Adjust the horizontal sealing edge' s pressure.</li> <li>6. Check to see if there are some scars on the cutting edge of the horizontal heat sealing edge.</li> </ol>
<p>9. Constant rate pump has leakage.</p>	<ol style="list-style-type: none"> <li>1. The gap between piston rings become wide.</li> <li>2. Solution: Loosen the fastening screw on the piston loop bar of the constant rate pump clockwise (inwards) screw it a little bit tight. (caution: Never overtighten! Or the piston will be damaged. )</li> </ol>

## 8. Wear – out Spare Parts

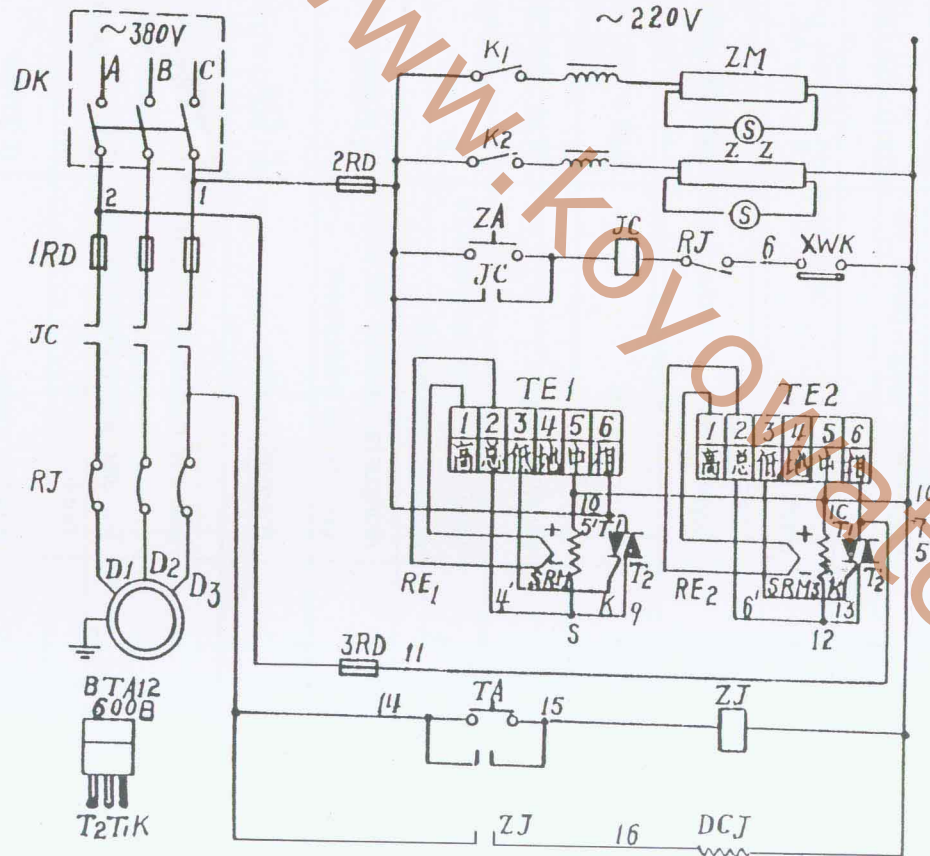
Name	Unit	Remark
PTEE non – adhesive tape	Piece	Made in the U. S.
Non – adhesive tape for vertical sealing rubber washer	Meter	Made in the U. S.
Vertical sealing rubber washer		
Horizontal sealing rubber washer	Piece	
Piston ring	Set	
Vertical sealing electric heating tube	Piece	300w
Horizontal sealing electric heating tube	Piece	500w
ultraviolet lamp tube	Piece	15
Vertical sealing edge	Piece	
Horizontal sealing edge	Piece	
Steel wire – sandwiched non toxic hose	Metre	
Bilateral controlled silicon	Piece	
Methyl silicon oil		

## 9. Electrical Elements List

NO	Symbol	Quantity	Name	Specification and Type
1	RD	5	Spiral fuse	RL – 15
2	DCT	1	Electromagnet	MQ – 0.72
3	XWK	1	Limit switch	Lx29 – 713
4	KK	2	Lamp switch	SDK – Ld312/IV
5	ZM	1	Fluorescent tube	ZOW/220V
6	ZZ	1	Ultraviolet lamp tube	ZWS Series 15w/220v
7	ZJ	1	Positioning shut – down relay	CJ10 – 5A/220v
8	ZA	1	Start button	LA – 19 – AT
9	TA	1	Stop button	LA – 19 – AT
10	JC	1	AC contactor	CJ0 – 10A/220V
11	RJ	1	Thermal relay	JR16 – 20/3A – 1.5A
12	TE1	1	Vertical sealing temperature control instrument	TE – 2601
13	TE2	1	Horizontal sealing temperature control instrument	TE – 2601
14	Re Re	1	Thermal couple	E. EA2
15	KT KT	2	Bilateral controlled silicon	BTA41 – 600B
16	Srm3	2	Tubular electrothermal elements	φ20 Stainless steel jacket
17	D	2	Electric motor	0.37KW



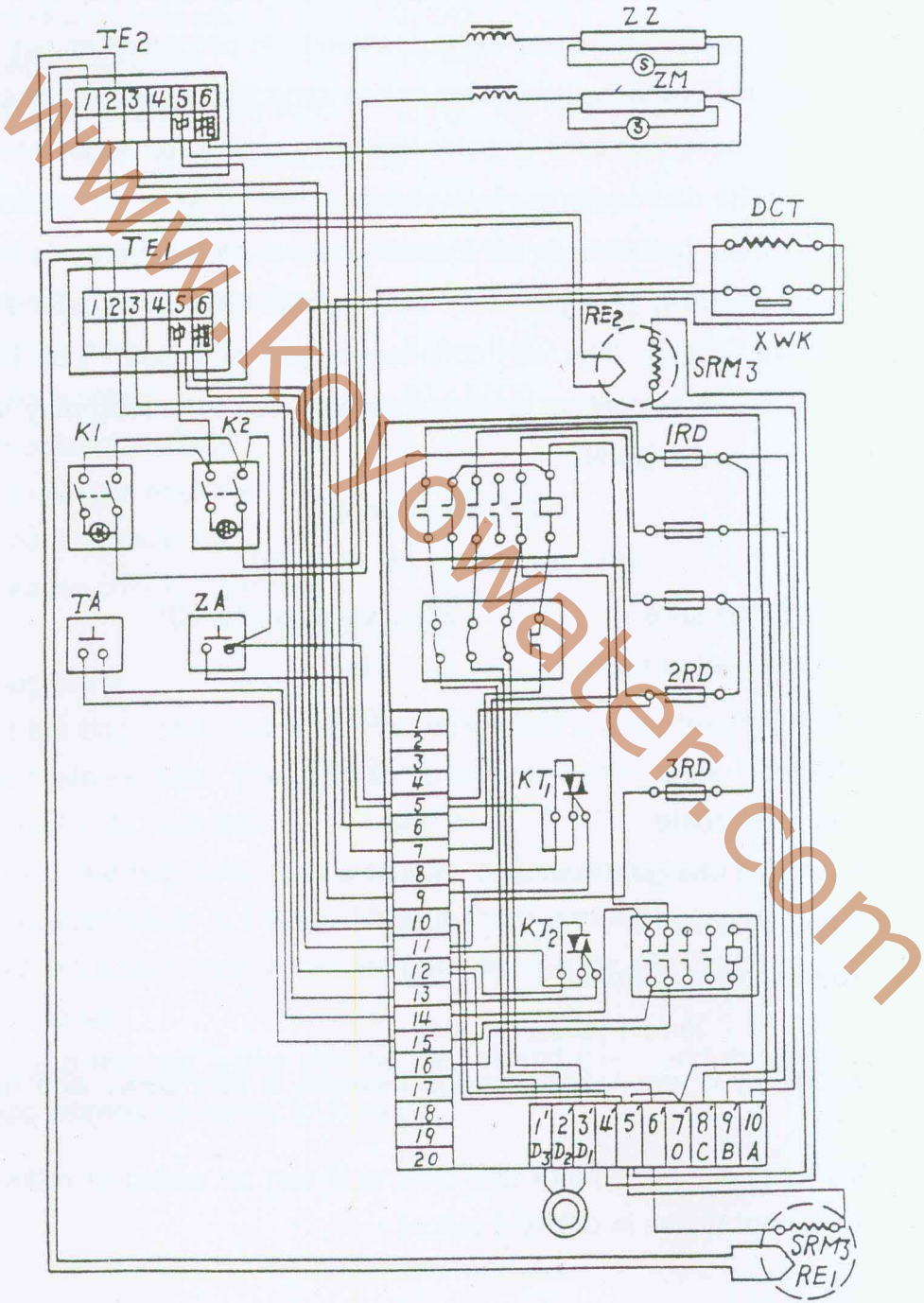
# 10. Electricity schematic Diagram



双向可控硅  
管脚图

Lighting fluorescent lamp
ultraviolet sterilization lamp
Motor control loop
Horizontal and vertical sealing temperature controller
Horizontal and vertical sealing electric Heater temperature Measurement and temperature control loop
Spacing shut - down relay and electro - magnet control loop

11. Electric Installation Wiring Diagram



## 12. Reference Materials

### 1. Mixing points:

Wash and sterilize the following mixing tools for use: (1) mixing jar (2) bench scale (3) stirrer (4) bucket (5) 250ml granulated glass (6) bench tray, balance etc. strictly follow the formula's requirements so that the materials' quality standard and accurate weight can be guaranteed. In proper order put the following materials in the mixing jar: (1) germfree sand filter paper (2) white granulated sugar (use boiled water to dissolve the white granulated sugar into syrup, then filter with white dacron for use) (3) edulcorator (4) juice (5) sodium benzoate (6) colorant etc use stirrer to stir it evenly so that all the materials in the jar can completely dissolve, then put in ① citric acid ② essence in order and give each an even stir. Finally, filter with cottonseed cake or a cloth – bag filter and sterilize with instantaneous sterilizer or ultraviolet sterilizer, then filling may start.

### 2. Formulae for Popular Drinks

#### (1) Orange Drink

(the amount for per 1000kg)

1. fresh orange juice	30kg (saccharinity: 10°)
2. white granulated sugar	20 ~ 63kg
3. edulcorator	80 ~ 500g
4. citric acid	0.5 ~ 1.2kg
5. sodium benzoate	0.2kg
6. emulsifying orange essence	250ml
7. banana essence	30ml
8. edible colorant: carmine	2g
lemon yellow	4g

If the colority of emulsifying orange essence is very dark, add no more colorant.

In this formula, edulcorator and citric acid can be added or reduced according to different tastes in different places.



(the following is the same as the above)

(2) Lemon Drink

- |                             |             |
|-----------------------------|-------------|
| 1. White granulated sugar   | 20 ~ 65kg   |
| 2. Citric acid              | 0.7 ~ 1.4kg |
| 3. edulcorator              | 80 ~ 500g   |
| 4. sodium benzoate          | 0.2kg       |
| 5. lemon essence            | 135ml       |
| 6. edible colorant: carmine | 0.7g        |
| lemon yellow                | 2.2g        |

(3) Pineapple Drink

(the amount for per 1000kg)

- |                             |           |
|-----------------------------|-----------|
| 1. White granulated sugar   | 20 ~ 65kg |
| 2. Citric acid              | 0.4 ~ 1kg |
| 3. edulcorator              | 80 ~ 500g |
| 4. sodium benzoate          | 0.2kg     |
| 5. pineapple essence        | 180ml     |
| banana essence              | 10ml      |
| 6. edible colorant: carmine | 1.5g      |
| lemon yellow                | 8g        |

3. Ice Bag Drink

put the bag drinks made by this packer into a deep freezing chamber, they will freeze into ice cube. This is what we call the ice bag drink. Here there are two specific methods available.

A, Put the bag drinks into a basket, put the basket into the salt solution of an ice – cream maker to freeze. When the bag drinks are frozen, take them out and wash them with clean water, the put them quickly into the cryogenice storage container to sell.

B, Put the bag drinks into the basket and then send them directly to the cryogenic storage container to freeze.